Dieldrin in cod liver from the North Sea - Time trend from 1998

Fromberg, Arvid; Højgård, Arne; Poulsen, Mette Erecius

Publication date:
2012

Document Version
Publisher's PDF, also known as Version of record

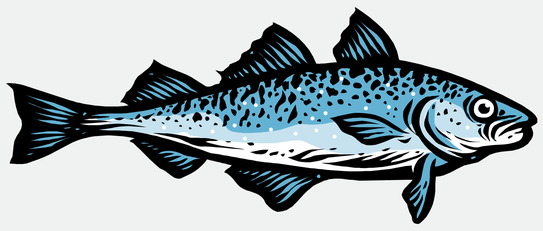
DTU Food
National Food Institute

Dieldrin in cod liver from the North Sea - Time trend from 1988

Arvid Fromberg[1], Arne Højgård[2] and Mette Erecius Poulsen[1]

1. DTU National Food Institute, Mørkhøj Bygade 19, DK-2860 Søborg, Denmark; e-mail: arfr@food.dtu.dk
2. Regional Veterinary and Food Administration Centre, Region West, Sønderskovvej 5, DK-8520 Lystrup, Denmark,

Monitoring of pesticide levels in fish samples is an important contribution to the intake estimations



Background for the monitoring programme

Monitoring programs for pesticides in food often include investigations of persistent organochlorine contaminants and metabolites and are carried out because of their potentially hazardous health effects on humans. Due to the organochlorine pesticides stability and tendency to accumulate in fatty tissues they can enter the food chain and therefore be found in marine species. Relatively high levels occur in cod liver, which has high lipid content and for that reason is suitable for monitoring purposes. Results for dieldrin in cod caught in the North Sea and Skagerrak from 1988 to 2010 are presented looking at the time trend and decline in the levels during the period including 116 samples.

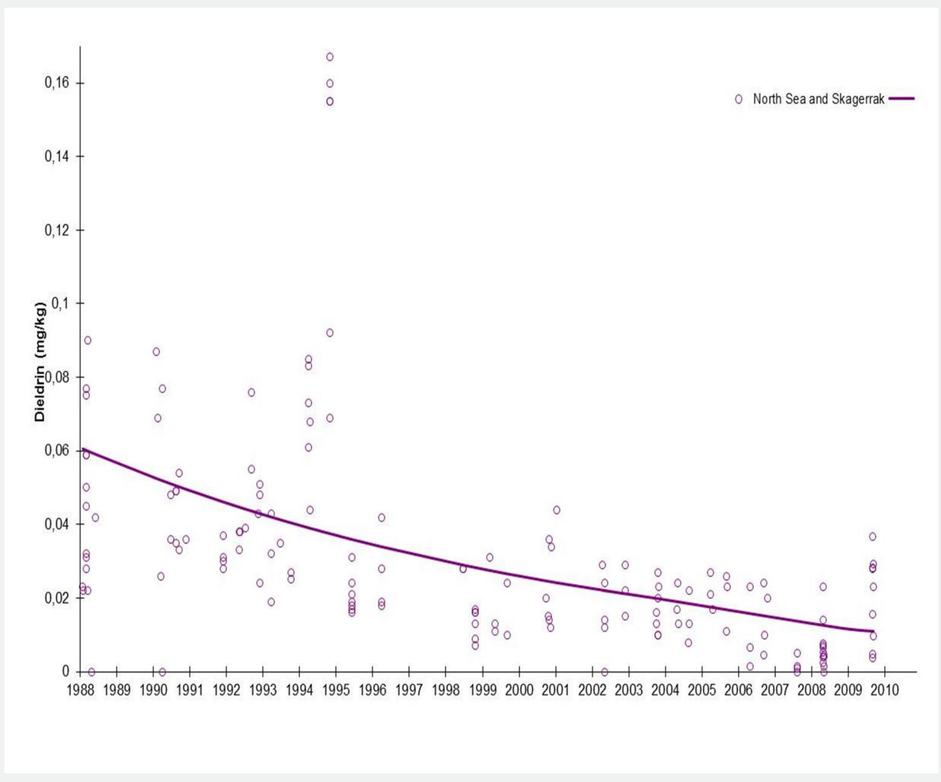
Estimated intake of dieldrin from consumption of fish

Mean	0.035
Median	0.015
90% fractile	0.093
95% fractile	0.125

Results give as µg/day

Adults, estimated intake from fish

The location of the North Sea



Time trend for the level of dieldrin in cod liver from fish caught in the North Sea and Skagerrak

Levels of dieldrin in cod liver has decreased during the last decades from 1988, however is this still the case for the North Sea and Skagerrak?

Time trend for dieldrin

Contents of organochlorine environmental contaminants in fish have decreased since 1988; however developments in recent years do not show a clear trend, but rather a more or less steady state condition. Statistical analyses of data from cod liver showed that the distribution of concentrations is best described by a logarithmic normal distribution, and that the development over time can be described by a linear regression based on logarithmized data.